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The influence of ethics orientation and information technology mastery on performance for agricultural extension worker in Konawe District

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This research aimed to examine the impact of ethics orientation and the mastery of information technology on the performance of agricultural extension workers in Konawe District. The study was conducted in Konawe District, Southeast Sulawesi Province, spanning from January to October 2022. The population and sample included all State Civil Servant (ASN) agricultural extension workers in Konawe District, totaling 113 individuals. The study incorporated exogenous variables, namely the ethics orientation and mastery of information technology of agricultural extension workers, and endogenous variables, focusing on the performance of agricultural extension workers. Descriptive and inferential statistical analyses were employed to assess the state of ethics orientation, mastery of information technology, and the performance of agricultural extension workers. The inferential analysis utilized Partial Least Square (PLS), an equation model of Structural Equation Modeling (SEM) based on a variance or component-centered structural equation modeling approach. The findings revealed a significant positive influence of ethics orientation on the performance of agricultural extension workers in Konawe District. Similarly, the mastery of information technology among agricultural extension workers significantly positively affected their performance in Konawe District.
Keywords: Ethical orientation, information technology, performance of Agricultural extension workers.

INTRODUCTION

The development of agriculture is significantly influenced by the pivotal role of agricultural extension. The effectiveness of this extension relies heavily on the competence of its workers in fulfilling their responsibilities. *Shah et al.* (2013)extension workers, serving as agents of change, play a crucial role in agricultural extension efforts. Khalid and Sherzad, (2019), suggest that the success of agricultural extension is thought to be connected to the professional competence of extension workers, aligning with societal needs and contemporary demands.
The challenge of professionalism in agricultural extension during its implementation arises from various factors, including ethical orientation and the proficiency in information technology among extension workers. Fangohoi *et al.* (2018), argued that the agricultural extension code of ethics will function as a legal norm and at the same time as a societal norm for professional extension workers. Additionally, the mastery of evolving information technology is deemed essential for extension workers to meet societal progress and needs.
Ethical orientation, defined as the adherence to professional ethics, is crucial for the professionalism of agricultural extension workers. The problem of agricultural extension professionalism arises because agricultural extension workers do not yet have a good ethical orientation in carrying out agricultural extension. Rosnita *et al.* (2017), that a The deficiency in ethical orientation contributes to the lack of professionalism in agricultural extension practices. Wulandari *et al.* (2021), argued that agricultural extension ethics is something that needs to be agreed upon so that not everyone feels capable of doing agricultural extension.
Ethics orientation of agricultural extension workers has an important role in the professionalism of agricultural extension workers. Agricultural extension workers who always adhere to ethics (ethics orientation) in carrying out counseling will be professional in carrying out their duties and functions as agricultural extension workers. Bon *et al.* (2017), argued that a person's ethical orientation will have a significant effect on ethical decision making. (Helmy, 2018), emphasized that a

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high ethical orientation will affect professional decision making. So that a person is required to have a high ethical orientation in carrying out his profession.

The success of implementing agricultural extension in the current digital era must also be supported by the ability of agricultural extension workers to master information technology. Mastery of information technology is one of the qualifications that must be mastered by professional extension workers. The problem of agricultural extension professionalism is also closely related to the agricultural extension agents mastery of information technology which is still problematic. Lubis and Sulistiawati (2021), The stagnation of agricultural innovation and information poses a challenge, limiting farmers' access to crucial information.

Proficiency in information technology among agricultural extension workers will enhance their professionalism, particularly in augmenting the capability of agricultural extension agents to disseminate information technology or agricultural innovations. PANDEY & KUMARI (2018) contend that information technology can also facilitate the progress of agricultural extension. Because in this day and age the use of information technology has become a necessity of society. Cascio and Montealegre (2016), emphasized that the world has now entered the era of an information society that is connected in a virtual world. Farmers in remote villages have also begun to take advantage of advances in information technology in meeting their needs and the needs of their farming business. Mushi *et al.* (2022), that the main focus of information technology in agriculture is to meet the needs of farmers for information.

The effectiveness of agricultural extension agents in fulfilling their responsibilities serves as an indication of the professionalism of these workers. Professionalism among agricultural extension workers is demonstrated through the exemplary performance of extension officers in executing their roles and responsibilities. Listiana *et al.* (2019) assert that the conduct of extension workers, reflecting a superior level of performance, is a clear manifestation of their professionalism.

The performance of agricultural extension workers in Konawe District is currently facing challenges, as evidenced by their performance, which is not yet at an optimal level. According to Prasetyo *et al.* (2020), the reported performance of agricultural extension workers in Konawe District indicates a moderate level, attributed to the incomplete implementation of essential elements in agricultural extension performance Jamil *et al.* (2023). argue that agricultural extension in Indonesia is constrained by limitations and a shortage of extension workers. The prevalent poverty among many farmers underscores the need for agricultural extension to intensify its role in assisting farmers in addressing their challenges, particularly in the overall aspects of their farming businesses. Enhancing the performance of extension workers is crucial for better outcomes, necessitating collaboration among all agricultural stakeholders to achieve this improvement.

The challenges in agricultural extension performance are intricately connected to the ethical orientation and proficiency in information technology of agricultural extension workers. The presence of issues in agricultural extension performance is directly linked to the ethical orientation and mastery of information technology among these workers. Consequently, researchers are keen on investigating, analyzing, and assessing the impact of ethical orientation and information technology mastery on the performance of agricultural extension workers. The research inquiries established for this investigation are as follows: In what manner does ethical orientation impact the performance of agricultural extension workers, and how does the proficiency in information technology influence the performance of agricultural extension workers in Konawe District?

MATERIALS METHODS

The study took place in Konawe District, Southeast Sulawesi Province, spanning from January to October 2022. The research encompassed all agricultural extension workers classified as State Civil Servants (ASN) in Konawe District, with a total of 113 individuals considered both the population and sample for the study. Casteel and Bridier (2021) contend that the population represents a broader area of interest, consisting of objects or subjects with specific qualities and characteristics that researchers apply for examination, leading to the formulation of conclusions. Shukla (2020) defines the population as the complete set of units of analysis whose attributes are to be estimated.

The sample for this study was selected through a census method, meaning the entire population of 113 food crop agricultural extension workers in Konawe District was included. According to Etikan (2016), a census sample is also referred to as a saturated sample. A saturated sample is a sampling approach in which the entire population is chosen as the sample, and it is commonly referred to as a census in this context.

This study uses exogenous variables and endogenous variables. The exogenous variables in this study are: (1) the ethics orientation of agricultural extension workers (X1) includes: the ethics orientation of idealism (X1.1) and the ethics orientation of relativism (X1.2); and (2) mastery of information technology to agricultural extension workers (X2) includes: mastery of hardware (X2.1) and mastery of software (X2.2). The endogenous variables in this study were: the performance of agricultural extension workers (Y) including: the performance of extension workers in planning (Y.1), the performance of extension workers in implementation (Y.2), and the performance of extension workers in evaluation agricultural extension (Y.3).

The measurement of instrument variables in this research

employed a Likert scale, assigning weights and values to the responses for each item. The scale ranged from strongly agree (5), agree (4), undecided (3), disagree (2), to strongly disagree (1). Joshi *et al.* (2015) describe the Likert scale as a tool utilized for gauging attitudes, opinions, and perceptions of an individual ora group regarding social phenomena.

The research data was analyzed using both descriptive and inferential statistics. Descriptive statistics were applied to depict or outline the status of variables such as ethics orientation, mastery of information technology, and the performance of agricultural extension workers. According to Kaur *et al.* (2018), descriptive statistics serve the purpose of presenting a description or an overview of the studied object using sample or population data as is, without performing analysis or drawing overarching conclusions.

In this study, Partial Least Square (PLS) was employed as the technique for inferential statistical data analysis. PLS is a structural equation modeling (SEM) equation model that utilizes a variance or component-based approach. According to Sarstedt *et al.* (2021), PLS-SEM analysis is oriented towards developing or constructing theory, particularly with a predictive focus. PLS is utilized to ascertain whether relationships exist between latent variables, essentially serving a predictive function.

The PLS-SEM analysis comprises two sub-models: the measurement model (outer model) and the structural model (inner model). As explained by Sadidi *et al.* (2018), the measurement model, or outer model, illustrates the relationship between each indicator block and its latent variables. The assessment of the measurement model involves confirmatory factor analysis, testing both convergent and discriminant validity. Reliability is evaluated through two methods, namely Cronbach's Alpha and Composite Reliability. Benitez *et al.* (2020) state that the evaluation of the structural model, or inner model, aims to predict the relationships between latent variables. The inner model illustrates the strength of relationships or estimations between latent or construct variables based on substantive theory. The analysis of the inner model in this study encompasses testing Path Coefficient, R-Square (R^2), Goodness of Fit (GoF), Q-Square (Q2), and hypothesis testing.

RESULTS AND DISCUSSION

Ethics orientation of agricultural extension workers: Ethics orientation is defined as the underlying view of the mind that a person uses in making ethical decisions (Albert *et al.*, 2015). Ethics orientation is a person's perspective in responding to an ethical or unethical behavior (Dissanayake, 2022). The state of ethics orientation in research is presented in Table 1.

Table 1. Categories of ethics orientation values for agricultural extension workers.

No.	Dimensions	Average	Category
1	Idealism ethics orientation	4.15	high
2	Relativism ethics orientation	2.95	medium
Amount		3.55	medium

Table 1 showed that the ethics orientation of agricultural extension workers is in the high category, while the ethics orientation of relativism is in the moderate category. This shows that in general the agricultural extension workers in Konawe District have properly referred to ethical idealism in every decision making in carrying out their duties but still need to be improved in considering relativism ethics.

The results of this study indicate that agricultural extension workers in Konawe District are individuals with the type of absolutism, individuals who have a high ethics orientation of idealism but have a low ethics orientation of relativism. As Forsyth (1980), stated that the two ethics concepts (ethics idealism and relativism) are not two opposite things but rather a separate scale, which can be categorized into four classifications of ethics orientation attitudes: (1) situationism, (2) absolutism, (3) subjective and (4) exceptionist. If the idealism orientation is high and the relativism ethics orientation is low, then it indicates a type of absolutism which assumes that the best result of an action can always be achieved by following universal moral rules (Table 1).

Mastery of information technology for agricultural extension workers: Proficiency in technology and information refers to the capability to comprehend and utilize information technology tools, with a particular emphasis on computers (Victoria, 2020). Mastery of information technology indicates an individual's adeptness in utilizing information technology, specifically devices on computers involved in processing, packaging, and presenting various forms of data, including audio, visual, audiovisual, and multimedia (Van *et al.*, 2021). The state of ethical orientation in research is presented in Table 2.

Table 2. Mastery of information technology for agricultural extension workers.

No.	Indicator	Average	Category
1.	Mastery of information technology hardware	3.57	medium
2.	Mastery of information technology software	3.59	medium
Amount		3.58	medium

Table 2 indicates that the proficiency of information technology among agricultural extension workers in Konawe District falls within the moderate range. This suggests that, on the whole, agricultural extension workers in Konawe District possess a reasonable command of information technology;

however, there is room for enhancement, particularly in the mastery of both information technology hardware and software. Sousa *et al.* (2016) highlight that information technology can contribute to the progression of agricultural extension. Setiawan *et al.* (2020) emphasize that the utilization of information technology in agriculture serves the purpose of fulfilling farmers' informational needs. According to McIntosh and Mansini (2018), the adoption of information technology has the potential to alleviate the stagnation observed in agricultural innovation and information.

Performance of agricultural extension workers: The work performance of extension workers in conducting their responsibilities and functions, particularly in rice field food crop extension, is referred to as the performance of agricultural instructor (Wulandari *et al.*, 2021). The findings of the study on the work performance of agricultural extension workers are detailed in Table 3.

Table 3. Performance of agricultural extension workers in Konawe District.

No.	Indicator	Average	Category
1.	Performance in planning agricultural extension	3.47	medium
2.	Performance in implementation agricultural extension	3.81	high
3.	Performance in evaluation agricultural extension	3.51	medium
Amount		3.60	medium

The performance of agricultural extension workers is gauged by the actual success achieved in carrying out their tasks and responsibilities efficiently and effectively within a specified time frame. Baruwadi *et al.* (2020) assert that the strong performance of agricultural extension workers has a positive impact on enhancing farmers' performance in elevating agricultural production (Table 3).

The focus of this instructor's performance is aimed at addres sing the challenges encountered by farmers. Dewi *et al.* (2021) state that performance is the outcome or execution of work in fulfilling a job, task, or function over a defined period.

Research result data analysis**:** In this research, the analysis of the PLS structural model was conducted with the assistance of SmartPLS 3.0 software. The data analysis employed Partial Least Squares Structural Equation Modeling (PLS-SEM), which is a technique utilized to refine or predict an established theory (Garson, 2016). The analysis of the structural model comprises several stages: (1) formulation of the theory for the structural model, (2) examination of the outer model, (3) assessment of the inner model, and (4) hypothesis testing (Hair *et al.*, 2014).

Structural model theory formulation**:** The structural model formulated in this research includes exogenous and endogenous variables. The exogenous variables are: (1) the ethics orientation of agricultural extension workers (X1) consists of: ethics idealism orientation (OEI) includes 5 indicators (OEI.1 – OEI.5) and ethics relativism orientation (OER) includes 5 indicators (OEI.1 – OEI .5); and (2) the mastery of information technology for agricultural extension workers (X2) consists of : mastery of hardware (PPK) mastery covering 7 indicators (PPK.1 – PPK.7); and mastery of software (PPL) includes 6 indicators (PPL.1 – PPL.6). The endogenous variables are the performance of agricultural extension workers (Y) consists of: the performance in planning of agricultural extension (KPR) includes 4 indicators (KPR.1 – KPR.4); the performance in implementation of agricultural extension (KPL) includes 6 indicators (KPL.1 – KPL.6); and the performance in evaluation of agricultural extension (KEV) includes 3 indicators (KPL.1 – KPL.3). The following is a picture of the formulation of the research structure model (Fig 1).

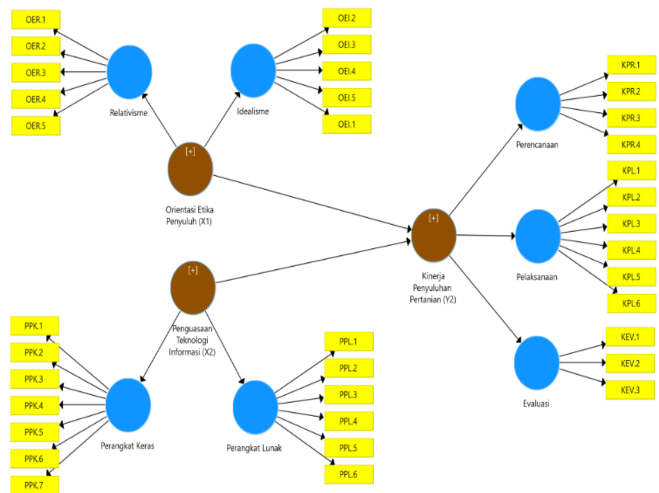

Figure 1. Formulation of the Structural Model Theory.

Outer model analysis**:** The measurement model, also known as the outer model, illustrates the relationship between each indicator block and its latent variables. Assessment of the measurement model involves confirmatory factor analysis to test convergent and discriminant validity. The reliability test is conducted using two methods: Cronbach's Alpha and Composite Reliability (Purwanto and Sudargini, 2021). The Outer Model serves as a measurement model for evaluating construct validity and reliability, with parameters such as convergent validity, discriminant validity, composite reliability, and Cronbach's alpha being crucial for the accuracy of the prediction model (Janadari *et al.*., 2016). The outcomes of the outer model processing are depicted in Fig. 2. Fig. 2 illustrates the elimination of various research instruments deemed invalid (outer loading value < 0.5). In the variable of ethical idealism orientation, two instruments were identified as invalid: OEI.2 (0.200) and OER.4 (0.458). For the hardware mastery variable in information technology, one instrument, namely PPK.1 (0.367), was found to be invalid.

According to Chan & Idris (2017), a loading factor value between 0.50 to 0.60 is considered sufficient for research in the early stages of developinga measurement scale. Kamis *et al.* (2020) and Pervan *et al.* (2017) also support the notion that an outer loading value of 0.5 to 0.6 is satisfactory for convergent validity requirements.

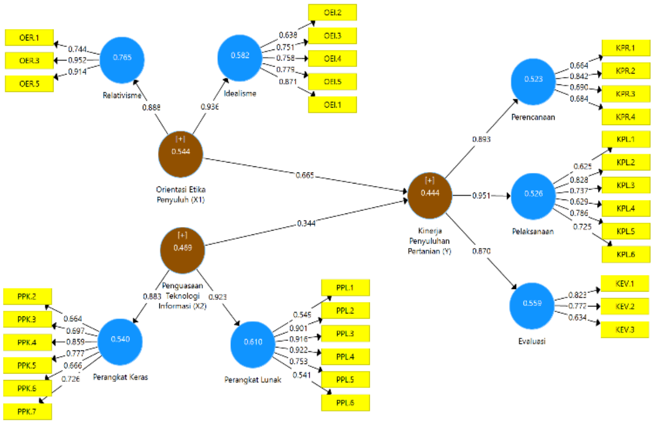

Figure 2. Outer Model Data Processing Results

In this study, the loading factor limit set was 0.5. Another parameter considered in evaluating cross-loading values is the average variance extracted (AVE). If the correlation of the indicator with the latent variable surpasses its correlation with other latent variables, it indicates high discriminant validity (Anekawati *et al.*, 2017). AVE values in this study are recommended to be ≥ 0.5.

The model's reliability test utilizes the composite reliability test, which is reinforced by Cronbach's alpha. Composite reliability assesses the reliability of indicators on a variable, and a variable is considered reliable or meets Cronbach's alpha if it has a value> 0.6. Latent variables are deemed to have good reliability if the composite reliability value exceeds 0.6. The composite reliability coefficient should ideally surpass 0.7, thougha value of 0.6 is still acceptable (Hair *et al.*, 2014). The internal consistency test is not an absolute necessity once construct validity has been established because a valid construct is inherently reliable, but the converse may not hold true (Mohajan, 2017). A composite reliability value of 0.6 to 0.7 and a Cronbach's alpha value > 0.7 are considered indicative of good reliability(Sarstedt *et al.*, 2021).

Figure 2 showed that all research variable instruments are valid because they have met the required convergent validity, which has an outer loading higher than 0.5. The following describes the results of testing the measurement model (outer model) which includes measurements of convergent validity, discriminant validity, composite reliability and Cronbach's alpha from ethics orientation constructs or variables, mastery of information technology, participatory counseling, and agricultural extension performance.

Table 4. Outer Model for Ethical Orientation Variable.

Dimensions	Indicators	Loading factor	Composite reliability	AVE
Idealism Ethic Orientation	OEI.1	0.8710	0.8735	0.5823
	OEI.2	0.6383		
	OEI.3	0.7506		
	OEI.4	0.7579		
	OEI.5	0.7794		
Relativism Ethics Orientation	OER.1	0.7437	0.9062	0.7651
	OER.3	0.9522		
	OER.5	0.9141		

Table 4 showed valid instruments forethical orientation variable. The ethics orientation of idealism includes: (OEI.1) the actions of extension workers refer to not harming farmers; (OEI.2) the actions of extension workers refer to not being able to threaten the honor of farmers; (OEI.3) the actions of extension workers refer to not threatening the welfare of farmers; (OEI.4) the actions taken by extension workers refer to conformity with universal norms; (OEI.5) the moral action of extension workers refers to conformity with the ideal nature of action. As for the ethics orientation of relativism, it includes: (OER.1) the actions of extension workers refer to the fact that ethical rules differ in every community; (OER.3) the actions of extension workers refer to moral values that do not apply absolutely but are in accordance with the community or the environment; and (OER.5) the actions of extension workers refer to the strict application of ethical rules will create better human relations (Table 4).

Table 5. Outer model for mastery of information technology variable.

Dimensions	Indicators	Loading factor	Composite reliability	AVE
Mastery of Information Technology Hardware	PPK.2	0.6639	0.8746	0.5397
	PPK.3	0.6966		
	PPK.4	0.8587		
	PPK.5	0.7773		
	PPK.6	0.6664		
	PPK.7	0.7259		
Mastery of Information Technology Software	PPL.1	0.5492	0.8998	0.6102
	PPL.2	0.9008		
	PPL.3	0.9157		
	PPL.4	0.9221		
	PPL.5	0.7528		
	PPL.6	0.5407		

Table 5 showed valid instruments for mastery of information technology variable. The mastery of information technology hardware includes: (PPK.2) extension workers are able to use a computer monitor in carrying out their duties; (PPK.3) able to use speakers in carrying out their duties; (PPK.4) able to use flashdisks in carrying out their duties; (PPK.5) able to use a projector in carrying out tasks; (PPK.6) able to use cameras in carrying out their duties; and (PPK.7) able to use printers in carrying out their duties as extension workers. The mastery

of information technology software includes: (PPL.1) extension workers are able to use Microsoft Word in carrying out their duties; (PPL.2) able to use Microsoft power point in carrying out tasks; (PPL.3) able to use internet explorer or chrome in carrying out their assignments; (PPL.4) able to use e-mail in carrying out their duties; (PPL.5) able to use Facebook (Fb) in carrying out their duties; (PPL.6) able to use WhatsApp (WA) in carrying out their duties as extension workers (Table 5).

Table 6. Outer model for performance of agricultural extension workers variable.

Dimensions	Indicators	Loading factor	Composite reliability	AVE
Performance of extension workers in extension planning	KPR.1	0.6640	0.8131	0.5234
	KPR.2	0.8422		
	KPR.3	0.6898		
	KPR.4	0.6838		
Performance of extension workers in extension implementation	KPL.1	0.6246	0.8683	0.5263
	KPL.2	0.8281		
	KPL.3	0.7373		
	KPL.4	0.6290		
	KPL.5	0.7857		
	KPL.6	0.7247		
Performance of extension workers in extension evaluation	KEV.1	0.8232	0.7897	0.5586
	KEV.2	0.7721		
	KEV.3	0.6343		

Table 6 showed valid instruments for agricultural extension performance variable. In terms of the performance of extension workers in extension planning, it includes: (KPR.1) extension workers make regional potential data and agro-ecosystems every year; (KPR.2) guide (supervise and assist) the preparation of the RDKK every year; (KPR.3) compile village and sub-district agricultural extension programs every year; and (KPR.4) make an annual agricultural extension work plan (RKTPP) every year. The performance of extension workers in extension implementation includes: (KPL.1) extension workers carry out dissemination of extension materials according to farmers' needs every month; (KPL.2) implements the agricultural extension method in the target area every month; (KPL.3) increasing the capacity of farmers to access market information, technology, infrastructure, and financing every year; (KPL.4) growing and developing farmer institutions (such as farmer groups) every year; (KPL.5) increases farm productivity (compared to previous productivity) every year; (KPL.6) grows and develops farmer economic institutions (such as farmer cooperatives) every year. The performance of extension workers in extension evaluation includes:(KEV.1) extension workers monitor the implementation of counseling every month; (KEV.2) extension workers evaluate the implementation of counseling every month; and (KEV.3) the extension worker makes a monthly report on the implementation of extension activities (Table 6).

***Inner model analysis*:** The subsequent examination following the completion of the measurement model (outer model) in the SmartPLS analysis is the inner model analysis. The findings from the analysis of the measurement model (outer model) indicate that the construct or variable meets the criteria for data validity and reliability (Wong, 2013). Presented below are the outcomes of the assessment of the model structure (inner model).

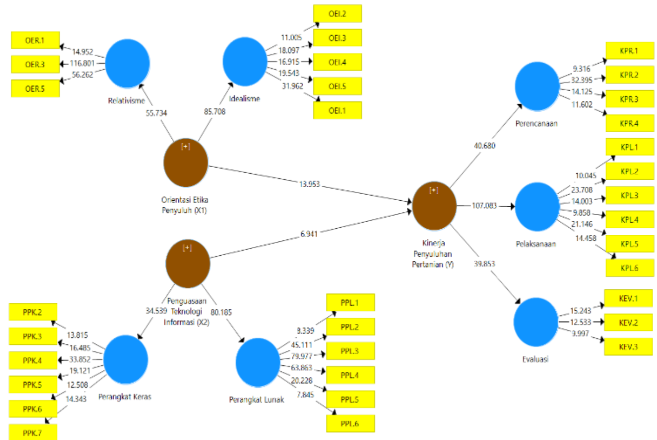

Figure 3. Results of structural model evaluation.

The examination of the structural model is encompassed in the inner model analysis. In research, inner model analysis comprises assessments such as Path Coefficient, R-Square (R^2), Goodness of Fit (GoF), and Q-Square/Predictive Relevance testing. Model fit testing, which includes Goodness of Fit, is employed to ascertain the compatibility of a model with the data.

***Path coefficient test*:** The assessment of path coefficients serves to demonstrate the direction of influence exerted by the independent variable on the dependent variable(Wong, 2013). A positive path coefficient value indicates a unidirectional influence of an independent variable on a dependent variable, while a negative value signifies an influence in the opposite direction. The path coefficient test additionally reveals the extent of the impact of an independent variable on the dependent variable. The outcomes of the Path Coefficient test can be found in Table7.

Table 7. Path coefficient values of research dependent variables.

Construct	Performance of agricultural extension workers (Y)
Ethics orientation of agricultural extension workers (X1)	0.665
Mastery of information technology for agricultural extension workers (X2)	0.344

Table 7 reveals that every variable in this model exhibits a positive path coefficient. This signifies that as the path coefficient value increases for an independent variable in relation to the dependent variable, the influence between the independent variables and the dependent variable becomes stronger.

***R-Square*:** An analysis of variance, also known as the determination test (R-Square), is conducted to assess the extent of influence each independent variable exerts on the dependent variable, as indicated by the R-Square value (Wong, 2013). The determination coefficient (R-Square) serves as a metric to gauge how much endogenous variables are impacted by other variables. A higher R-Square value suggests a more effective prediction model for the proposed research. The R-Square value (R^2) can be utilized to evaluate the impact of specific endogenous variables and whether exogenous variables possess a significant effect (Suhan *et al.*, 2018). The R-Square values are presented in **Table 8.**

Table 8. R-Square Value

Construct	R square	R square adjusted
Performance of agricultural extension workers (Y)	0.907	0.905

Table 8 illustrates that the R-Square for the participatory extension variable is 0.907, indicating that 90.7 percent of the performance of agricultural extension workers is influenced by ethical orientation and mastery of information technology. Based on the obtained R-Square from this study, it can be concluded that the model falls into the good category. According to Hair *et al.* (2014), R-Square results of 0.67 and above for endogenous latent variables in the structural model suggest that the impact of exogenous variables (those causing an effect) on endogenous variables (those being influenced) is considered good. Conversely, if the R-Square result ranges from 0.33 to 0.67, it is categorized as moderate, and if it falls between 0.19 and 0.33, it is considered weak.

A larger R-Square exceeding 0.75 indicates a robust model, an R-Square in the range of 0.50-0.75 suggests a moderate model, and an R-Square in the range of 0.25-0.50 implies a weak model (Wu *et al.*, 2022). The criteria for interpreting R-Square are as follows: (1) An R-Square value of 0.75 and above indicates a strong influence between constructs; (2) An R-Square value in the range of 0.50-0.75 indicates a moderate influence between constructs; and (3) An R-Square value in the range of 0.25-0.50 signifies a weak influence between constructs (Hair *et al.*., 2014) (Table 8).

Fit Models/*Goodness of Fit* (Gof): Goodness of Fit (Gof) to validate the model as a whole. Goodness of fit for evaluation of measurement models and structural models, simple measurements for model predictions(Purwanto and Sudargini, 2021). Goodness of Fit (GoF) is a measure of the feasibility of a model. The GoF formula is:

$$\mathrm{GoF} = \sqrt{\mathrm{AVE} \times \mathrm{R}^2}$$

$$\mathrm{GoF} = \sqrt{0.56761 \times 0.87575} = 0.7051$$

The Goodness of Fit (GoF) value is 0.7051. The higher the GoF value, the more accurate the representation of the model. Samosir *et al.* (2023) categorizes GoF scores into three levels: 0.1 (weak), 0.25 (moderate), and 0.36 (high). A GoF value of 0.7051 is interpreted as a substantial GoF, indicating that both the measurement model (outer model) and the structural model (inner model) are deemed valid or feasible.

***Q-Square /predictive relevance*:** Q-Square (Q^2) or predictive relevance serves as a test for the predictive capability of structural models. The objective of predictive relevance testing is to assess the accuracy of the observed values generated by the model and the estimation of its parameters. It is established that if the Q-Square value surpasses 0, it indicates that the model possesses predictive relevance. The Q-Square value can be calculated using the formula: Q-Square = 1 – [(1 – R2)], where R^2 represents the R-Square of the dependent variable (Wong, 2013). The subsequent results present the calculation of the Q-Square value.

$$\textit{Q-Square} = 1 - [(1 - R^2)]$$

$$\textit{Q-Square} = 1 - [(1 - 0.907)] = 0.907$$

The Q-Square (Q^2) or predictive relevance value in this study is 0.907. These findings indicate that the research model exhibits predictive relevance, given that Q^2 exceeds 0 and is considered good as it approaches a value of 1. According to Sarstedt *et al.* (2021), the Q-Square value is employed to assess the model's goodness, with a higher Q-Square value signifying a better fit of the structural model with the data.

***Hypothesis Testing*:** The testing of hypotheses involves examining the original sample estimates (O) values to ascertain the direction of the relationship between variables. Additionally, t-statistics (T) and P-value (P) are scrutinized to determine the significance level of the relationship. Original sample values proximate to +1 indicate a positive relationship, whereas values close to -1 suggest a negative relationship. A t-statistics value exceeding 1.96 or a P-value smaller than the significance level (<0.05) signifies the significance of the relationship between variables (Sarstedt *et al.*, 2021).

Table 9. Influence of independent variables on dependent variables.

Construct	Original sample (O)	Sample mean (M)	T Statistics (|O/STDEV|)	P values
Ethics Orientation (X1) -> Performance of Extension Workers (Y)	0.6647	0.6620	13.9801	0.0000
Mastery of Information Technology (X2) -> Performance of Extension Workers (Y)	0.3444	0.3477	6.8305	0.0000

Table 9 indicates that both hypotheses in this research are valid since each hypothesis has a P-Value <0.05. According to the information presented in Table 9, it can be inferred that: (1) ethical orientation significantly and positively influences the performance of agricultural extension agents; and (2) proficiency in information technology significantly and positively impacts the performance of agricultural extension workers in Konawe District.

The influence of ethics orientation on performance for agricultural extension workers**:** The data presented in Table 9 demonstrates that the P-Values is 0.0000, which is less than 0.05. This outcome signifies that ethical orientation has a substantial and direct impact on the performance of rice field extension agents in Konawe District. The competency of extension workers is closely linked to ethical considerations in decision-making during the execution of their responsibilities, thereby influencing and enhancing the performance of extension workers in counseling, encompassing planning, implementation, and evaluation of extension activities. Ramlee *et al.* (2016), explained that there is a significant influence between religious behavior on employee work results. Mitchell (2015) explained that in ethics inherent virtue values (virtue). Virtue is a disposition inherent in a person, which allows him to behave morally. Anindya and Adhariani (2019),explained that the principle of intrinsic religiosity can regulate a person's behavior so that it will prevent him from committing fraudulent acts.

The influence of information technology mastery on performance for agricultural

Extension workers**:** Table 9 indicates that the P-Values is 0.000, which is less than 0.05. This result signifies that the mastery of information technology has a direct and significant impact on the performance of agricultural extension workers in Konawe District. The proficiency of extension agents in utilizing information technology in their responsibilities can enhance the performance of agricultural extension officers in the planning, execution, and evaluation of extension activities. According to Sabir *et al.* (2018), the presence of information technology supports the function and role of extension workers by facilitating the dissemination of information through the internet network, connecting primary agricultural stakeholders (farmers) with research institutions and business actors. Milovanovic (2014) further explains that information technology's existence can deliver extension services across various agricultural sectors, playing a crucial role in rural development and leading to diverse transformations (Table 9).

Conclusion**:** The ethical orientation of agricultural extension workers positively and significantly influences their performance. An increased level of ethics orientation in the actions of agricultural extension workers corresponds to a higher performance level in Konawe District. Additionally, the mastery of information technology among agricultural extension workers significantly contributes to their performance. A heightened proficiency in information technology among agricultural extension workers corresponds to an elevated performance level in Konawe District.

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